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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,376	12/12/2005	Dieter Bechtold	069236-4827	9083

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FOLEY & LARDNER LLP
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EXAMINER

SCULLY, STEVEN M

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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07/07/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,376	Applicant(s) BECHTOLD ET AL.	
	Examiner Steven Scully	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 20-24 is/are allowed.
- 6) ☒ Claim(s) 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

BATTERY HAVING SEALED CONTACT TERMINAL BUSHING

Examiner: Scully S.N.: 10/560,376 Art Unit: 1795 July 2, 2010

DETAILED ACTION

1. The Amendment filed March 4, 2010 has been entered. Claims 1 and 20 have been amended and claim 25 is newly added. Accordingly, claims 1-15 and 20-25 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claim rejections of claims 1-11, 14, 15 and 20-24 under 35 U.S.C. 103(a) as being unpatentable over Ovshinsky et al. (US5,558,950) in view of Schäfer (GB2,026,761) and TWI World Centre for Materials Joining Technology, "Laser Welding of Plastics (August 2000); herein referred to as "TWI" are withdrawn in view of the Amendment.

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (US2003/0203278) in view of TWI World Centre for Materials Joining Technology, "Laser Welding of Plastics (August 2000); herein referred to as "TWI" as evidenced by Schäfer (GB2,026,761).

With respect to claim 25, Hamada et al. disclose a battery module comprising a plurality of batteries connected in series. A housing 6 comprises a housing wall separating adjacent cells 5. A contact element 26 is electrically coupled to the first and second cells. A plastic sealing element 28 is provided in the opening formed by the housing wall and the contact element 26 and lies flat against the housing wall at an interface. See Figures 2 and 8.

Hamada et al. do not disclose one of the supporting surface and the housing wall is at least partially transparent for a laser beam and the other of the supporting surface and the housing wall is absorbent for the laser beam. However, it is well known to laser weld battery casings in order to form improved seals. In fact, Schäfer (GB2,026,761) discloses "mirror" welding, and as shown in the table on Page 3 of TWI, the forms of laser welding each use mirrors. TWI discloses three forms of laser welding, CO₂ laser radiation is readily absorbed by plastics, but limits the depth of penetration of the beam, restricting the technique to film applications. See Introduction. Further, the efficiency is less than that of Diode transmission laser welding. See Table on Page 3. Transmission laser welding is capable of welding thicker parts than CO₂ welding, and since the heat affected zone is confined to the joint region no marking of the outer surfaces occurs. Further, precise focusing of the laser beam allow accurate joints to be formed, a non-contact process which is both clean and hygienic, they may be performed in a single-shot or continuous manner. See Page 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to further make the housing of Hamada et al. transparent because TWI teaches high efficiency in diode transmission laser welding,

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no marking of the outer surfaces, precise and accurately formed joints and a clean and hygienic process that may be performed both in a single-shot or continuous manner.

Allowable Subject Matter

5. Claims 1-15 and 20-24 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art of record is Ovshinsky et al. (US5,558,950) in view of Schäfer (GB2,026,761) and TWI World Centre for Materials Joining Technology, "Laser Welding of Plastics (August 2000). However, none of the prior art of record disclose or suggest the limitation as required by independent claim 1 wherein a plastic sealing element is provided on the contact element, the sealing element comprising a supporting surface which lies flat against the housing wall at an interface and a second surface extending at substantially a right angle to the supporting surface; the supporting surface and the second surface of the sealing element in contact with the housing wall such that there is no open space between the sealing element and the housing wall, or the limitation as required by independent claim 20 wherein a plastic sealing element is coupled to the contact element, the sealing element provided in the at least one aperture of the housing wall such that there is no open space between the sealing element and the aperture of the housing wall, the sealing element comprising a supporting surface which lies flat against the housing wall at an interface and an adjacent surface extending at substantially a right angle to the supporting surface.

Response to Arguments

Applicant's arguments with respect to claims 1-15 and 20-24 have been found persuasive and the rejections have been withdrawn. Arguments with respect to newly added claim 25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact/Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Scully whose telephone number is (571)270-5267. The examiner can normally be reached on Monday to Friday 7:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. S./
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795